



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/652,326

08/29/2003

Anand A. Kekre

VRT0098US

1638

60429

7590

03/16/2006

CSA LLP

4807 SPICEWOOD SPRINGS RD.

BLDG. 4, SUITE 201

AUSTIN, TX 78759

EXAMINER

PHAM, KHANH B

ART UNIT

PAPER NUMBER

2166

DATE MAILED: 03/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



## DETAILED ACTION

### *Drawings*

1. A **descriptive** textual label for **each numbered element** in these figures would be needed to fully and better understand these figures without substantial analysis of the detailed specification. Any structural detail that is of sufficient importance to be described should be shown in the drawing. Optionally, applicant may wish to include a table next to the present figure to fulfill this requirement. See 37 CFR 1.83. 37 CFR 1.84(n)(o) is recited below:

*"(n) Symbols. Graphical drawing symbols may be used for conventional elements when appropriate. The elements for which such symbols and labeled representations are used must be adequately identified in the specification. Known devices should be illustrated by symbols which have a universally recognized conventional meaning and are generally accepted in the art. Other symbols which are not universally recognized may be used, subject to approval by the Office, if they are not likely to be confused with existing conventional symbols, and if they are readily identifiable.*

*(o) Legends. Suitable descriptive legends may be used, or may be required by the Examiner, where necessary for understanding of the drawing, subject to approval by the Office. They should contain as few words as possible."*

**The drawings are objected** to because they fail to show necessary textual label of features or symbols in **Figs. 1-5** as described in the specification.

### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

**Claims 8-25 are rejected** under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

**Claims 8-14** are directed to “an apparatus” comprising means for performing some functions. However, each and every one of the means could be software, as described in the specification at page 14, [0049]. The claimed “apparatus” is therefore software per se and is nonstatutory.

**Claims 15-21** are directed to “a machine readable medium”. However, the claims is not limited to tangible embodiment. In view of Applicant’s disclosure, specification pages 14-15, [0050], the medium is not limited to tangible embodiments, instead being defined as including both tangible embodiment (e.g., “recordable media such as floppy disk and CD-ROM”) and intangible embodiments (e.g. “transmission type media such as digital and analog communication links”, or “distribution system developed in the future”). As such, the claims are not limited to statutory subject matter and are therefore nonstatutory.

**Claims 22-25** are directed to “A data processing system” comprising components. However, each and every one of the components could be software, as described in the specification at page 14, [0049]. The claimed “system” is therefore software per se and is nonstatutory.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 1-25 are rejected** under 35 U.S.C. 102(e) as being anticipated by Teloh et al. (US 2003/0014432 A1), hereinafter referred to as “**Teloh**”.

**As per claim 1**, Teloh teaches a method of performing cascaded replication  
(See Fig. 9) comprising:

- “replicating data to be written to a data volume of a first node to a data volume of a second node” at page 2, [0018];
- “and replicating data to be written to said data volume of said second node to a data volume of a third node” at page 2, [0018],
- “wherein, at least one of said replicating data to be written to said data volume of said first node to said data volume of said second node and said replicating data to be written to said data volume of said second node to said data volume of said third node comprises asynchronously replicating data” at page 2, [0018] and page 4, [0048].

**As per claim 2**, Teloh teaches the method of claim 1, wherein “said replicating data to be written to said data volume of said first node comprises asynchronously replicating said data to be written to said data volume of said first node to said data volume of said second node” at page 4, [0048].

**As per claim 3**, Teloh teaches the method of claim 2, wherein “said replicating data to be written to said data volume of said second node comprises asynchronously replicating said data to be written to said data volume of said second node to said data volume of said third node” at page 2, [0018].

**As per claim 4**, Teloh teaches the method of claim 2, wherein “said replicating data to be written to said data volume of said second node comprises periodically replicating said data to be written to said data volume of said second node to said data volume of said third node” at page 2, [0018].

**As per claim 5**, Teloh teaches the method of claim 2, wherein, “said replicating data to be written to said data volume of said first node comprises, replicating data to be written to a data volume of a primary node to a data volume of an intermediate node; and said replicating data to be written to said data volume of said second node comprises, replicating data to be written to said data volume of said intermediate node to a data volume of a secondary node” at page 2, [0018] and Fig. 9.

**As per claim 6**, Teloh teaches the method of claim 5, wherein "said replicating data to be written to said data volume of said intermediate node comprises replicating data to be written to said data volume of said intermediate node to a data volume of each of a plurality of secondary nodes" at page 2, [0018] and page 3, [0038].

**As per claim 7**, Teloh teaches the method of claim 2, wherein, "said replicating data to be written to said data volume of said first node comprises replicating data to be written to said data volume of said first node to said data volume of said second node using a first data link coupled between said first node and said second node; said replicating data to be written to said data volume of said second node comprises replicating data to be written to said data volume of said second node to said data volume of said third node using a second data link coupled between said second node and said third node; and said first data link has a higher bandwidth than said second data link" at page 2, [0018] and Fig. 9.

**Claims 8-14** recite an apparatus configured to perform the method as in claims 1-7, and therefore rejected by the same reasons.

**Claims 15-21** recite a machine readable medium for performing the method as in claims 1-7, and therefore rejected by the same reasons.

**As per claim 22**, Teloh teaches a data processing system (Fig. 9) comprising:

- “a log to store data to be written to at least one of a data volume of a first node and a data volume of a second node” at page 5, [0057];
- “and a replication facility configured to replicate data to be written to said data volume of said first node to said data volume of said second node and to replicate data to be written to said data volume of said second node to a data volume of a third node using said log” at page 2, [0018],
- “wherein, said replication facility comprises a replication facility configured to asynchronously replicate at least one of said data to be written to said data volume of said first node and said data to be written to said data volume of said second node” at page 2, [0018].

**As per claim 23**, Teloh teaches the data processing system of claim 22, wherein “said replication facility further comprises, a replication facility configured to asynchronously replicate said data to be written to said data volume of said first node to said data volume of said second node” at page 4, [0048].

**As per claim 24**, Teloh teaches the data processing system of claim 23, wherein “said replication facility further comprises, a replication facility configured to asynchronously replicate said data to be written to said data volume of said second node to said data volume of said third node” at page 2, [0018].



**As per claim 25**, Teloh teaches the data processing system of claim 23, wherein "said replication facility further comprises, a replication facility configured to periodically replicate said data to be written to said data volume of said second node to said data volume of said third node" at page 2, [0018].

### ***Conclusion***

5. The prior art made of record, listed on form PTO-892, and not relied upon, if any, is considered pertinent to applicant's disclosure.

If a reference indicated as being mailed on PTO-FORM 892 has not been enclosed in this action, please contact Lisa Craney whose telephone number is **(571) 272-3574** for faster service.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh B. Pham whose telephone number is (571) 272-4116. The examiner can normally be reached on Monday through Friday 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on (571) 272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Khanh B. Pham  
Primary Examiner  
Art Unit 2166

March 3, 2006

A handwritten signature in black ink, appearing to read 'Kpham', with a long horizontal flourish extending to the right.